

REMARKS

In response to the Office's communication dated May 3, 2006, Applicant has amended claims 1-4, 6-8, 17-20, 28-31, 37, 39, 41, 43 and 45. Accordingly, claims 1-9, 17-21, 28-31 and 37-46 are presently pending in this application and are the subject of the Office's action. In addition, claims 47-49 have been added. Applicant respectfully request further examination and reconsideration of the application in view of the foregoing amendments and the provided remarks.

A. Claims Rejections in view of 35 U.S.C. § 112, second paragraph

Claims 1-9, 17-21, 28-31, and 37-46 were rejected by the Office under 35 U.S.C. §112, second paragraph, as being indefinite. In light of the provided claim amendments, Applicant respectfully submits that the rejections have been overcome. In particular, Applicant has made a genuine effort to address each of the concerns raised by the Examiner relating to § 112, in particular, the indefiniteness of the claims. Applicant's undersigned would like to thank the Examiner for the specific comments related to each of the claim elements and the request for further clarification. Accordingly, Applicant respectfully submits that each of the Examiner's concerns have been addressed and are reflected in the claims as amended. The claims as amended distinctly claim the present invention and are supported throughout the specification, in particular, as found on pages 4-7 of the specification and as further exemplified in Example 1 on pages 11 and 12 of the specification.

More particularly, Claim 1 has been amended to distinctly claim the present invention and further describe the relationship of elements as requested by the Examiner. In view of the Examiner's remarks, the Applicant has amended the claims to clarify the use of a first mass spectrometry based characterization, as claimed in step (A) for comparison with a second mass spectrometry based characterization, as claimed in step (D). Support for this amendment may be found throughout the specification, in particular, starting on the page bottom of page 6 to top of page 7. Applicant further submits that these claim amendments do not add any new matter. Applicant further believes that all the amendments have removed the Office's rejections based

on lack of antecedent basis. Accordingly, reconsideration and withdrawal of the rejections are hereby respectfully requested.

B. Claims Rejections under 35 USC 102(e) or, in the alternative, under 35 U.S.C. 103(a)

Claims 1-5, 17 and 28-29 were rejected by the Office under 35 U.S.C. 102(e) or in the alternative 35 U.S.C. 103(a) over Nelson et al (US 2001/0019829). Applicant traverses the rejection and respectfully requests reconsideration in light of the provided remarks.

Claim 1 of the present application positively recites a comparison step (E), specifically providing the step of “comparing said first mass spectrometry based characterization and said second mass spectrometry based characterization of said eluted target protein to determine said at least one antibody that binds to said at least one target protein”. Nelson cannot meet this limitation, among others. The present invention provides a method of selecting/identifying an antibody through the characterization and comparison of target proteins (*not* the antibody directly). In particular, the present invention calls for the use of mass spectrometry to determine the specificity for binding of an antibody through the characterization of target proteins. More particularly, mass spectrometry is used to identify the bound protein which consequently characterized the specificity of an antibody.

In contrast, the Nelson reference proposes to use mass spectrometry to identify the mere presence of an antibody within a serum. The Nelson reference does not provide for or even suggest the characterization and identification of target proteins to determine antibody specificity for binding. As cited by the Office, paragraph [0149] of the Nelson reference only suggests that the mere presence of a specific antibody is detected.

The present invention as claimed, emphasizes and focuses on using the identification and profiling of proteins to identify and select antibodies and their binding specificity. The present invention further presents the advantage of generating and screening affinity ligands to proteins without requiring pure protein. Applicant believes that based on the provided claim amendments, the rejection has been overcome. The Office suggested that in accordance with MPEP 2116.1 rejection under 102/103 is proper since the claims are confusing and subject to numerous interpretation. Applicant has a genuine belief that the amendments to the claims

address the Examiner's rejections in view of the Nelson reference. Accordingly, Applicant respectfully requests reconsideration.

Claims 1-9, 17-21, 18-31 and 37-46 were further rejected under 35 USC 103(a) as being unpatentable over Nelson in view of Xu (2003/0157089) and Zsebo et al. (6,759,215). Applicant traverses the rejection and requests reconsideration in light of the provided amendments and related remarks.

As previously suggested, Applicant believes that the claims as amended clarify and further define the present invention. As a result, Applicant believes that the rejections made by the Examiner have been rendered moot in view of the provided claim amendments. Nonetheless, in the interest of expediting prosecution on the merits, Applicant believes that the Nelson reference fails to meet the limitations of the claims as suggested above. Moreover, even if the combination of the cited references is proper, the combination of the Xu and Zsebo references with the Nelson reference fail to meet the limitations of the claims as amended and as discussed above

Applicant's undersigned understands the nature of the 102/103 rejection, accordingly, Applicant has a genuine belief that the amendments to the claims address the Examiner's rejections and all references that are of record. Applicant suggests that based on the above provided remarks the Office's rejection has been overcome. Applicant respectfully requests reconsideration.

CONCLUSION AND REQUEST FOR RECONSIDERATION

Reconsideration and withdrawal of all claim rejections are respectfully requested. Applicants believe that the present application is in condition for allowance.

Should the Examiner have any questions or would like to discuss any matters in connection with the present application, the Examiner is invited to contact the undersigned at (248)203-0766 or mgambrellglenn@dykema.com.

Respectfully submitted,



Mykah M. Gambrell-Glenn

Reg. No. 46,720

DYKEMA GOSSETT PLLC

39577 Woodward Avenue Suite 300

Bloomfield Hills, Michigan 48304

lpmail@dykema.com

Customer No. 26,127

Attorney for Applicant(s)

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